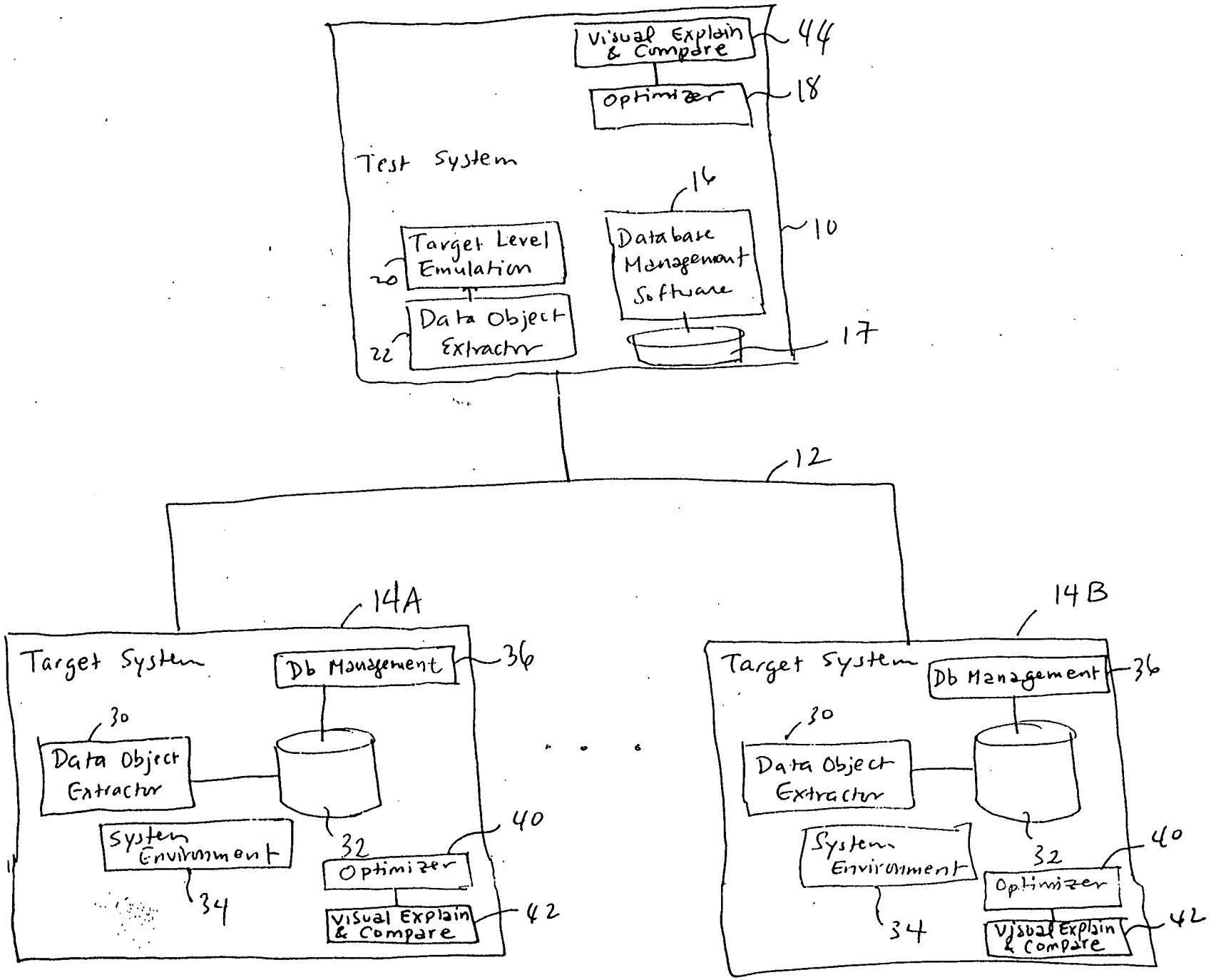


FIG. 1

096897.06300

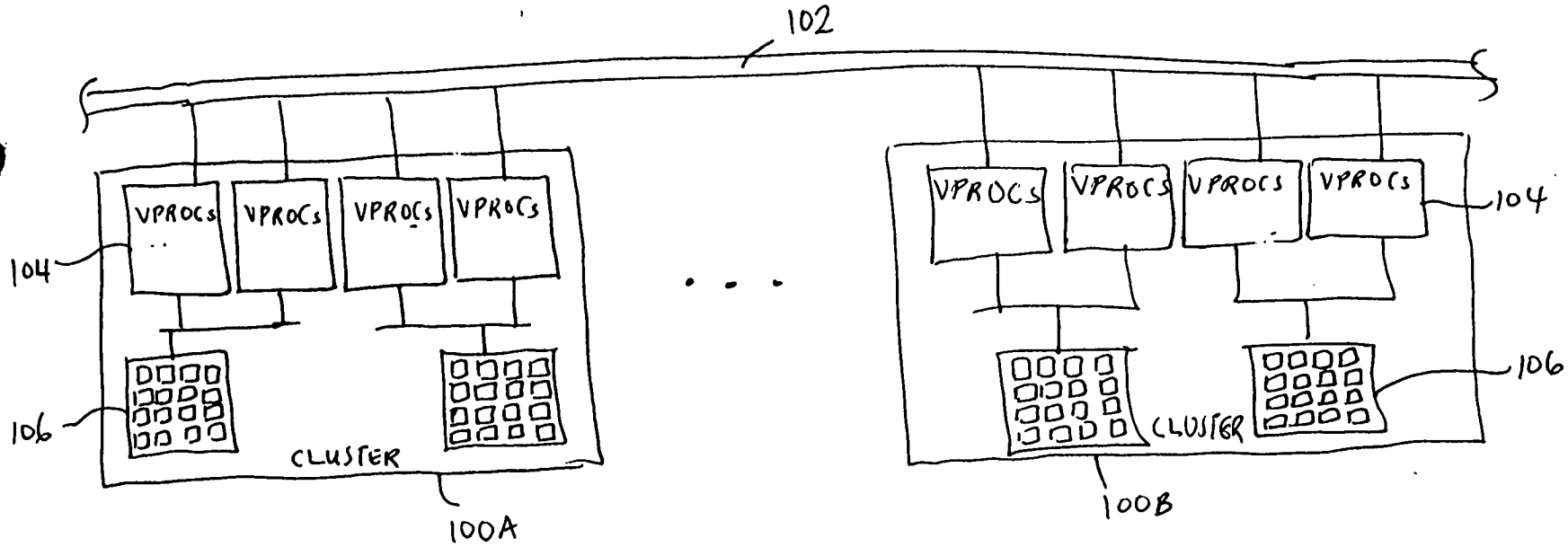

MPP Network
102
VPROCs
VPROCs
VPROCs
VPROCs
104
106
CLUSTER
100A
VPROCs
VPROCs
VPROCs
VPROCs
104
106
CLUSTER
100B

FIG. 2

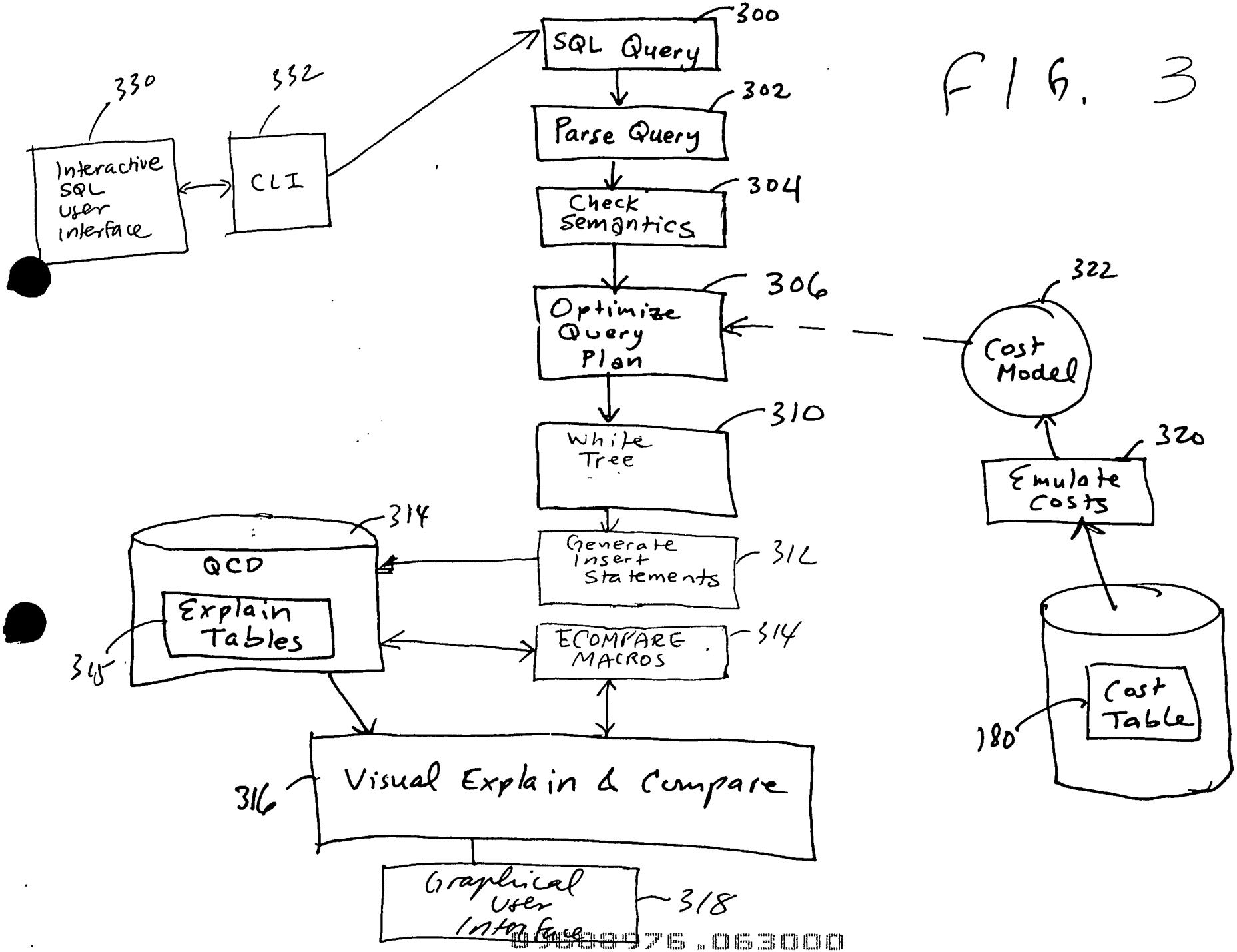

300
SQL Query
302
Parse Query
304
Check Semantics
306
Optimize Query Plan
310
White Tree
312
Generate Insert Statements
314
ECOMPARE MACROS
316
Visual Explain & Compare
318
Graphical User Interface
330
Interactive SQL User Interface
332
CLI
QCD
Explain Tables
345
322
Cost Model
320
Emulate Costs
180
Cost Table

FIG. 3

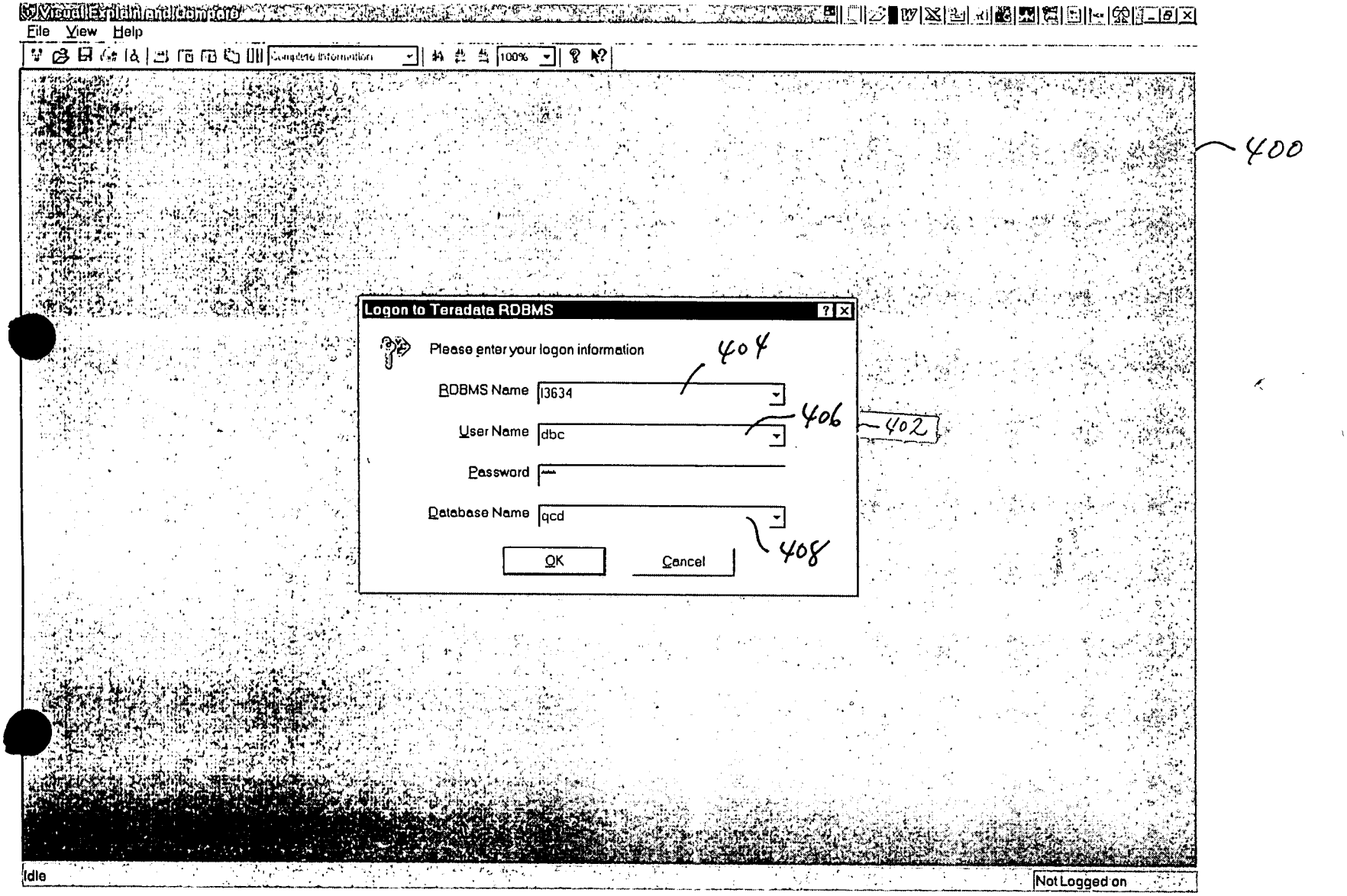

File View Help
100%
400
Logon to Teradata RDBMS
Please enter your logon information
404
RDBMS Name
13634
406
User Name
dbc
402
Password
Database Name
qcd
408
OK
Cancel
Idle
Not Logged on

FIG. 4

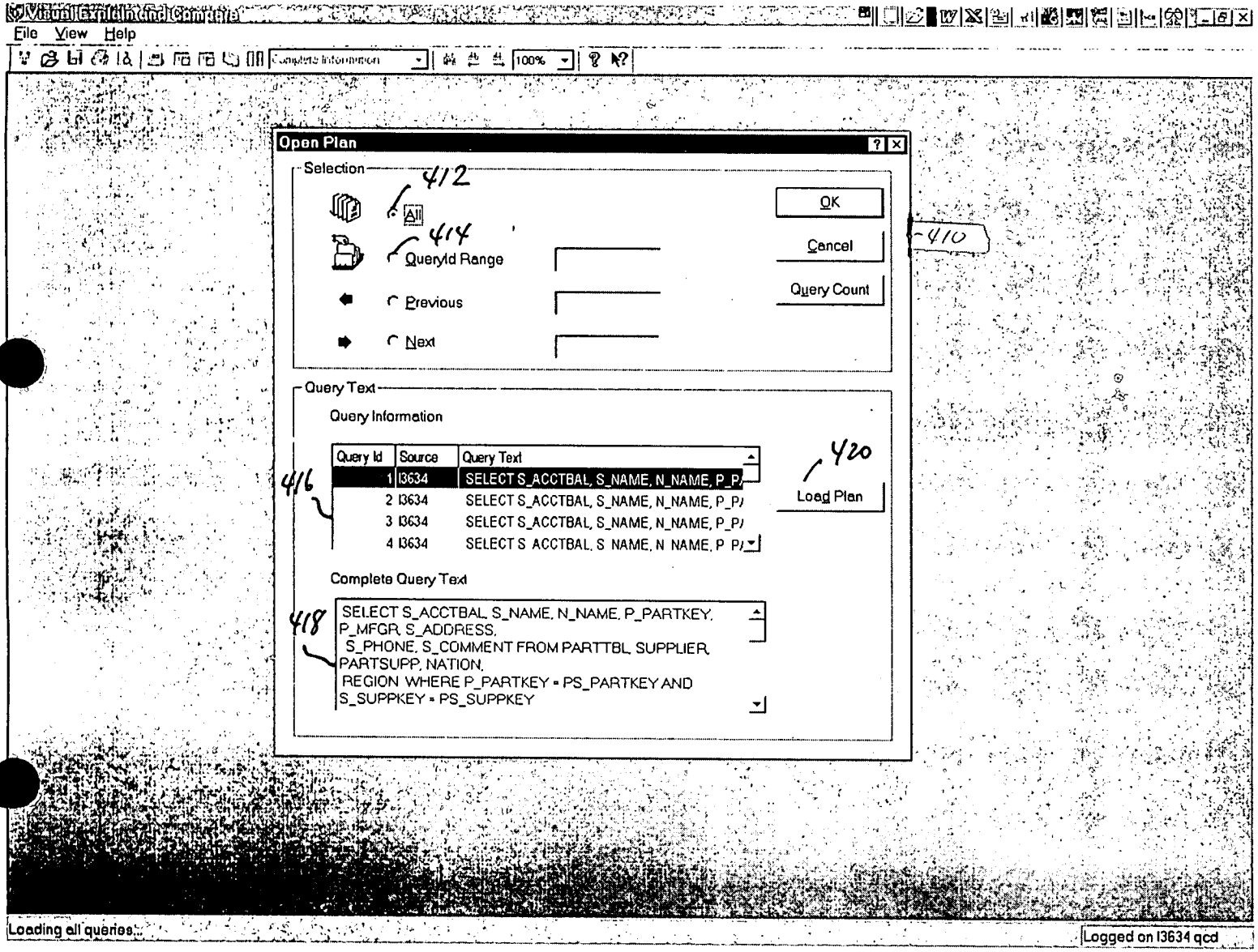

File View Help
Open Plan
Selection
412
All
414
QueryId Range
Previous
Next
OK
Cancel
Query Count
410
Query Text
Query Information
Query Id
Source
Query Text
1 I3634 SELECT S_ACCTBAL, S_NAME, N_NAME, P_P/
2 I3634 SELECT S_ACCTBAL, S_NAME, N_NAME, P_P/
3 I3634 SELECT S_ACCTBAL, S_NAME, N_NAME, P_P/
4 I3634 SELECT S_ACCTBAL, S_NAME, N_NAME, P_P/
416
420
Load Plan
Complete Query Text
418
SELECT S_ACCTBAL, S_NAME, N_NAME, P_PARTKEY, P_MFGR, S_ADDRESS, S_PHONE, S_COMMENT FROM PARTTBL, SUPPLIER, PARTSUPP, NATION, REGION WHERE P_PARTKEY = PS_PARTKEY AND S_SUPPKEY = PS_SUPPKEY
Loading all queries...
Logged on I3634 qcd

FIG. 5

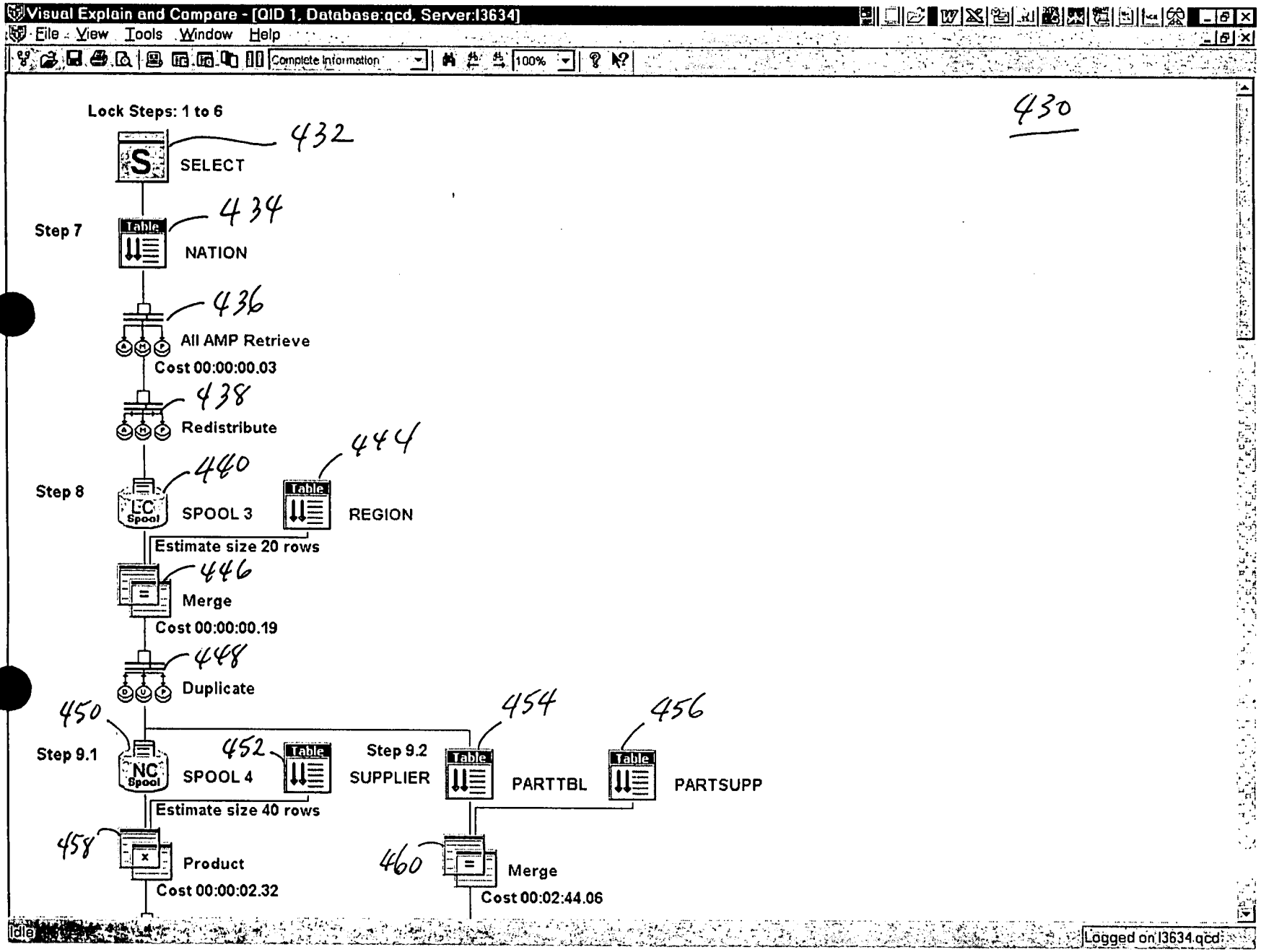


FIG. 6

09608976.063000

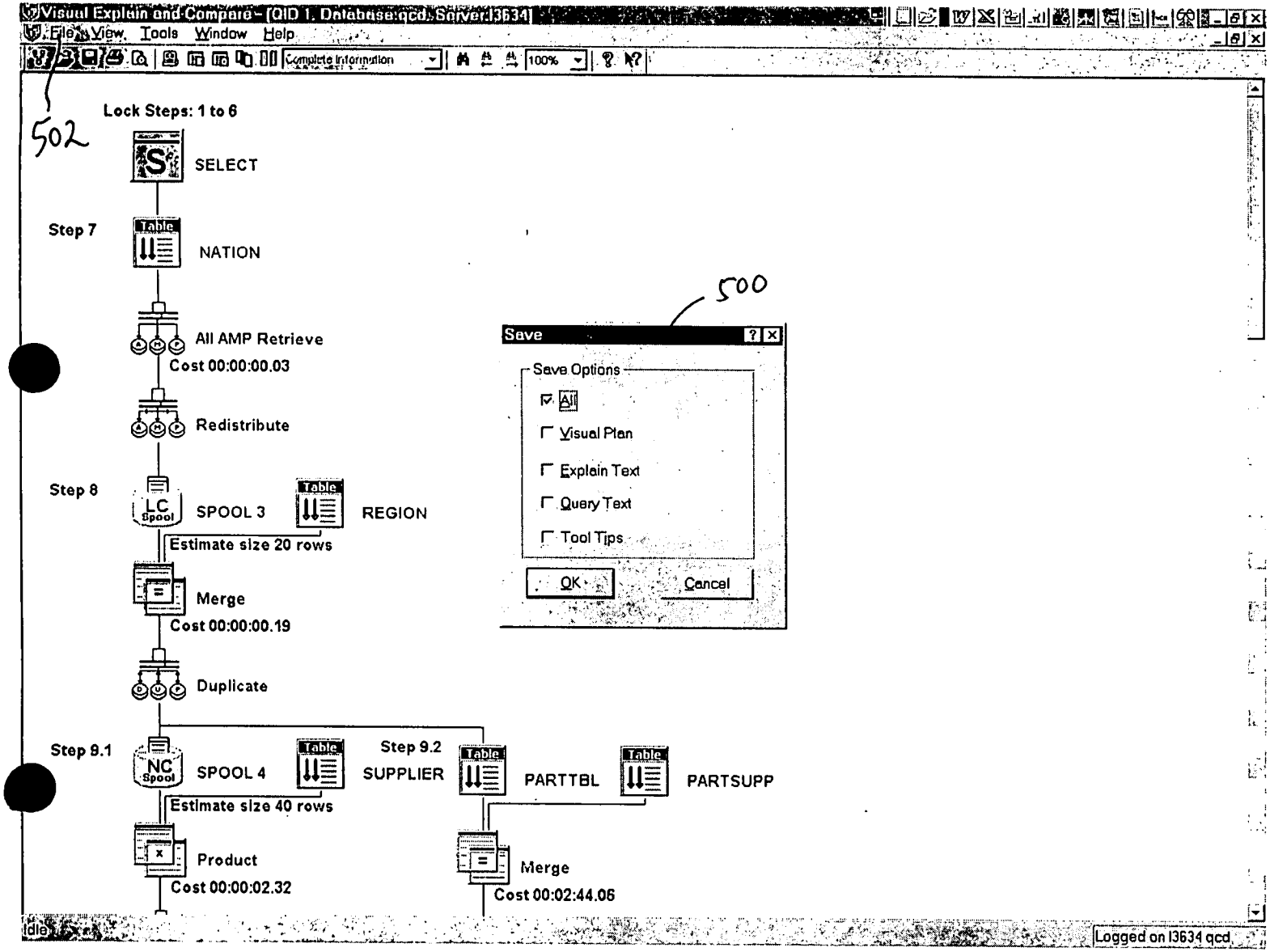

Visual Explain and Compare - [QID 1, Database:qcd, Server:l3634]
File View Tools Window Help
Complete Information
100%
502
Lock Steps: 1 to 6
SELECT
Step 7
Table
NATION
All AMP Retrieve
Cost 00:00:00.03
Redistribute
Step 8
LC Spool
SPOOL 3
Table
REGION
Estimate size 20 rows
Merge
Cost 00:00:00.19
Duplicate
Step 9.1
NC Spool
SPOOL 4
Table
Estimate size 40 rows
Product
Cost 00:00:02.32
Step 9.2
Table
SUPPLIER
Table
PARTTBL
Table
PARTSUPP
Merge
Cost 00:02:44.06
500
Save
Save Options
All
Visual Plan
Explain Text
Query Text
Tool Tips
OK
Cancel
Idle
Logged on l3634 qcd

FIG. 7

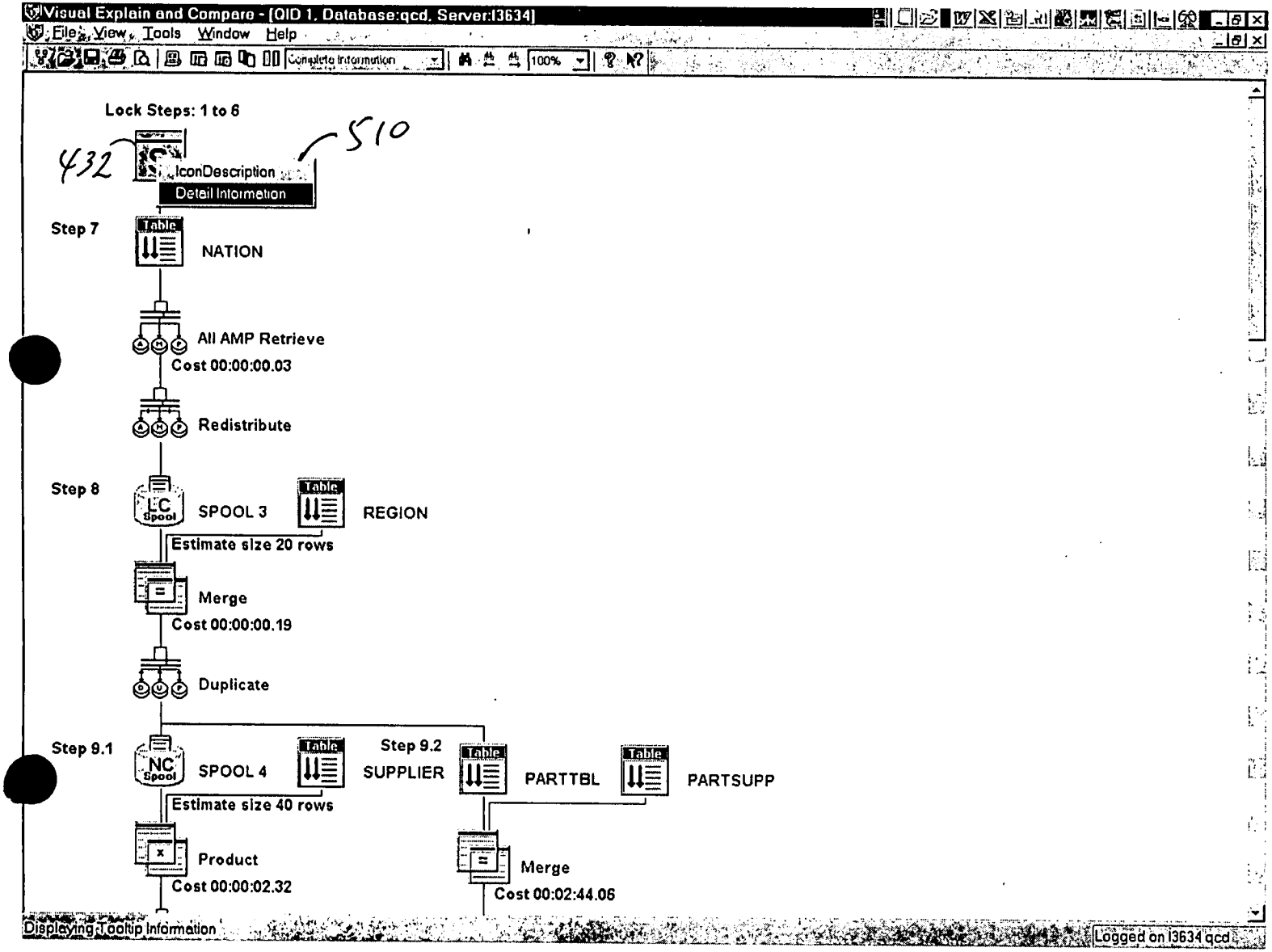

Visual Explain and Compare - [OID 1, Database:qcd, Server:l3634]
File View Tools Window Help
Completa Information
100%
Lock Steps: 1 to 6
432
510
IconDescription
Detail Information
Step 7
Table
NATION
All AMP Retrieve
Cost 00:00:00.03
Redistribute
Step 8
LC Spool
SPOOL 3
Table
REGION
Estimate size 20 rows
Merge
Cost 00:00:00.19
Duplicate
Step 9.1
NC Spool
SPOOL 4
Table
Estimate size 40 rows
Product
Cost 00:00:02.32
Step 9.2
SUPPLIER
Table
PARTTBL
Table
PARTSUPP
Merge
Cost 00:02:44.06
Displaying Tooltip Information
Logged on l3634 qcd

FIG. 8

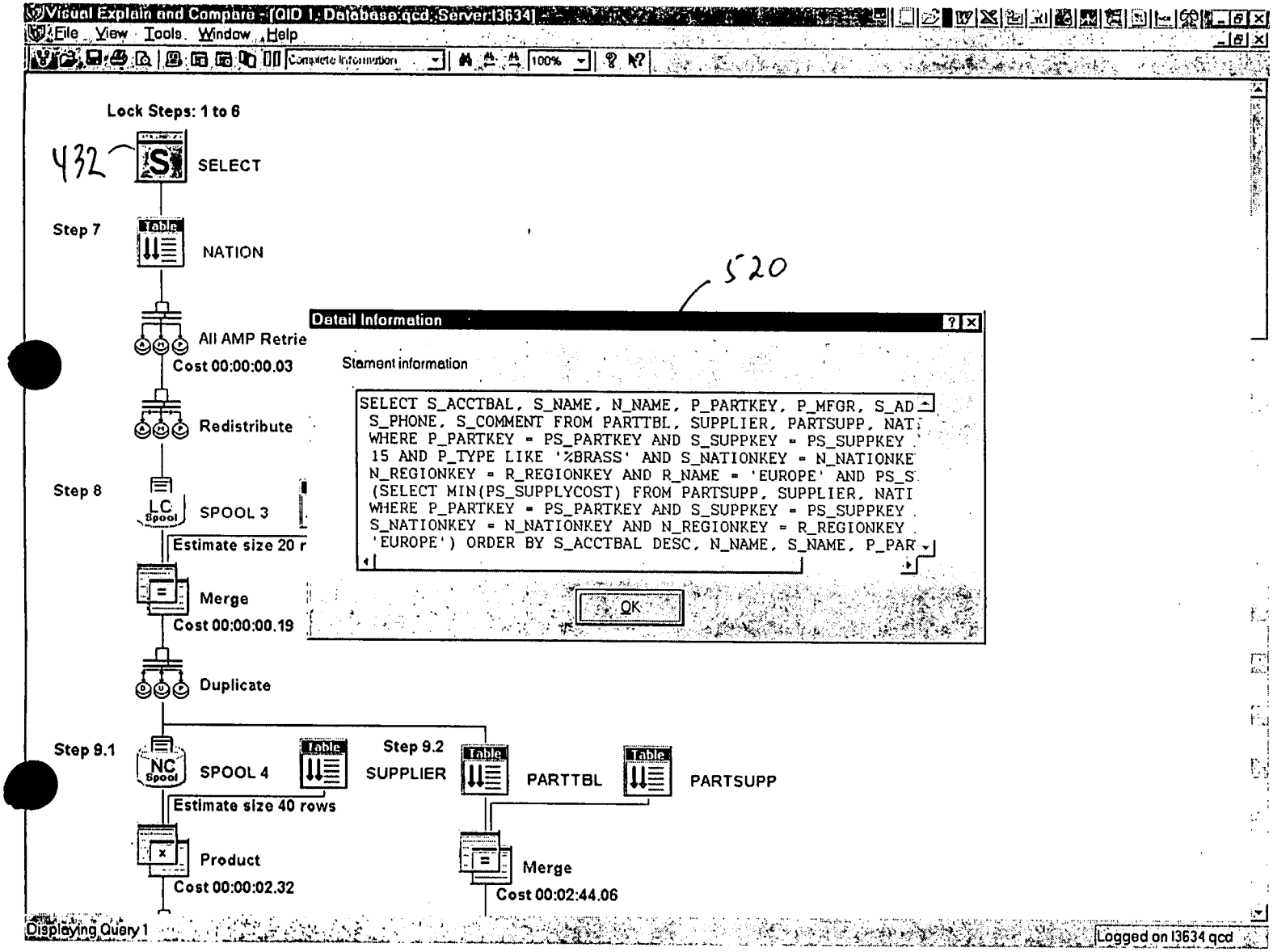

Visual Explain and Compare - [QID 1, Database qcd, Server:l3634]
File View Tools Window Help
Complete Information
100%
Lock Steps: 1 to 6
432
SELECT
Step 7
NATION
All AMP Retrie
Cost 00:00:00.03
Redistribute
Step 8
SPOOL 3
Estimate size 20 r
Merge
Cost 00:00:00.19
Duplicate
Step 9.1
SPOOL 4
Estimate size 40 rows
Product
Cost 00:00:02.32
Step 9.2
SUPPLIER
PARTTBL
PARTSUPP
Merge
Cost 00:02:44.06
520
Detail Information
Statement information
SELECT S_ACCTBAL, S_NAME, N_NAME, P_PARTKEY, P_MFGR, S_AD
S_PHONE, S_COMMENT FROM PARTTBL, SUPPLIER, PARTSUPP, NAT
WHERE P_PARTKEY = PS_PARTKEY AND S_SUPPKEY = PS_SUPPKEY
15 AND P_TYPE LIKE '%BRASS' AND S_NATIONKEY = N_NATIONKE
N_REGIONKEY = R_REGIONKEY AND R_NAME = 'EUROPE' AND PS_S
(SELECT MIN(PS_SUPPLYCOST) FROM PARTSUPP, SUPPLIER, NATI
WHERE P_PARTKEY = PS_PARTKEY AND S_SUPPKEY = PS_SUPPKEY
S_NATIONKEY = N_NATIONKEY AND N_REGIONKEY = R_REGIONKEY
'EUROPE') ORDER BY S_ACCTBAL DESC, N_NAME, S_NAME, P_PAR
OK
Displaying Query 1
Logged on l3634 qcd

FIG. 9

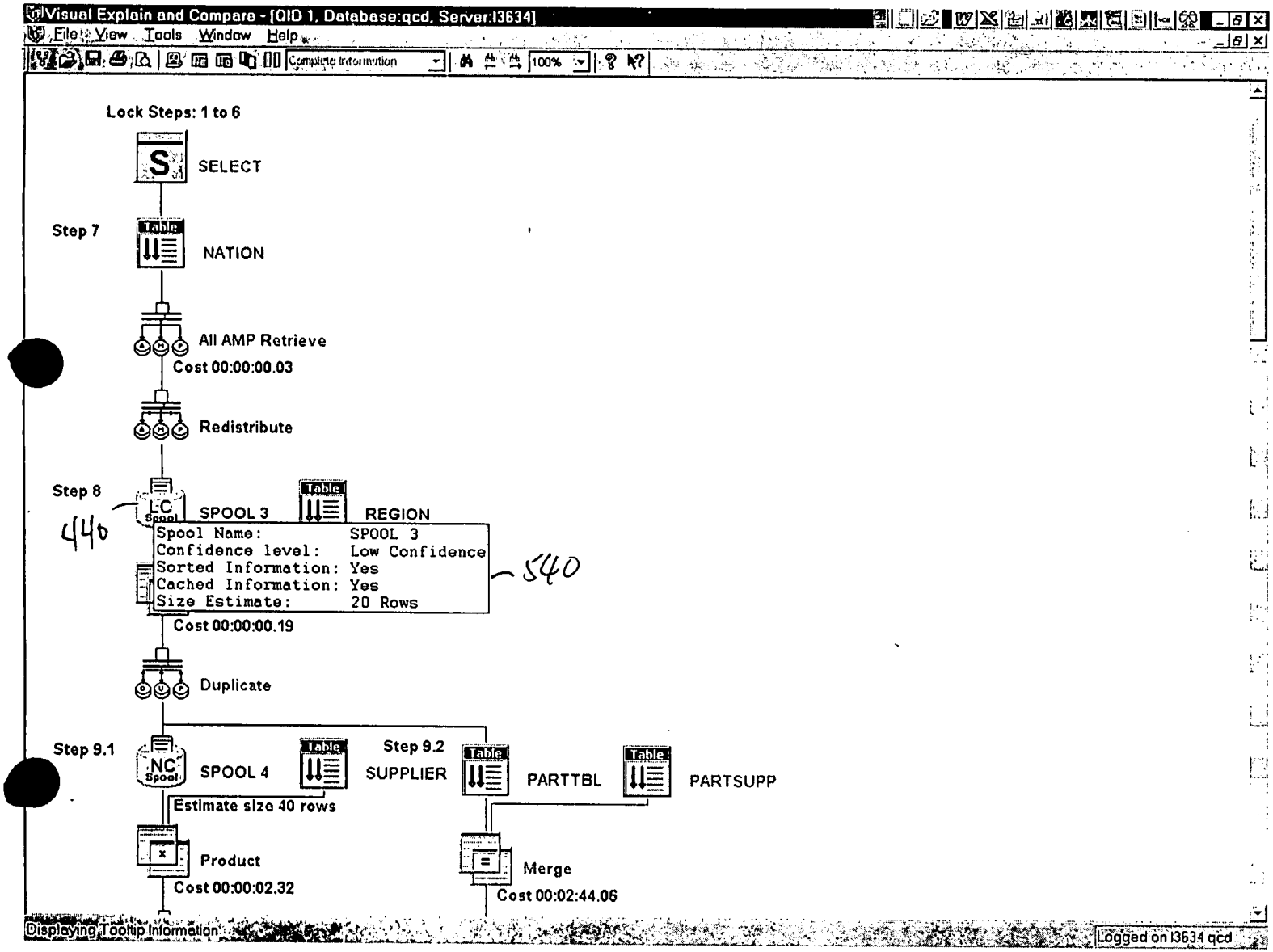

Visual Explain and Compare - [QID 1, Database:qcd, Server:l3634]
File View Tools Window Help
Complete Information
100%
Lock Steps: 1 to 6
SELECT
Step 7
NATION
All AMP Retrieve
Cost 00:00:00.03
Redistribute
Step 8
SPOOL 3
REGION
440
Spool Name: SPOOL 3
Confidence level: Low Confidence
Sorted Information: Yes
Cached Information: Yes
Size Estimate: 20 Rows
540
Cost 00:00:00.19
Duplicate
Step 9.1
SPOOL 4
Step 9.2
SUPPLIER
PARTTBL
PARTSUPP
Estimate size 40 rows
Product
Cost 00:00:02.32
Merge
Cost 00:02:44.06
Displaying Tooltip Information
Logged on l3634 qcd

FIG. 11

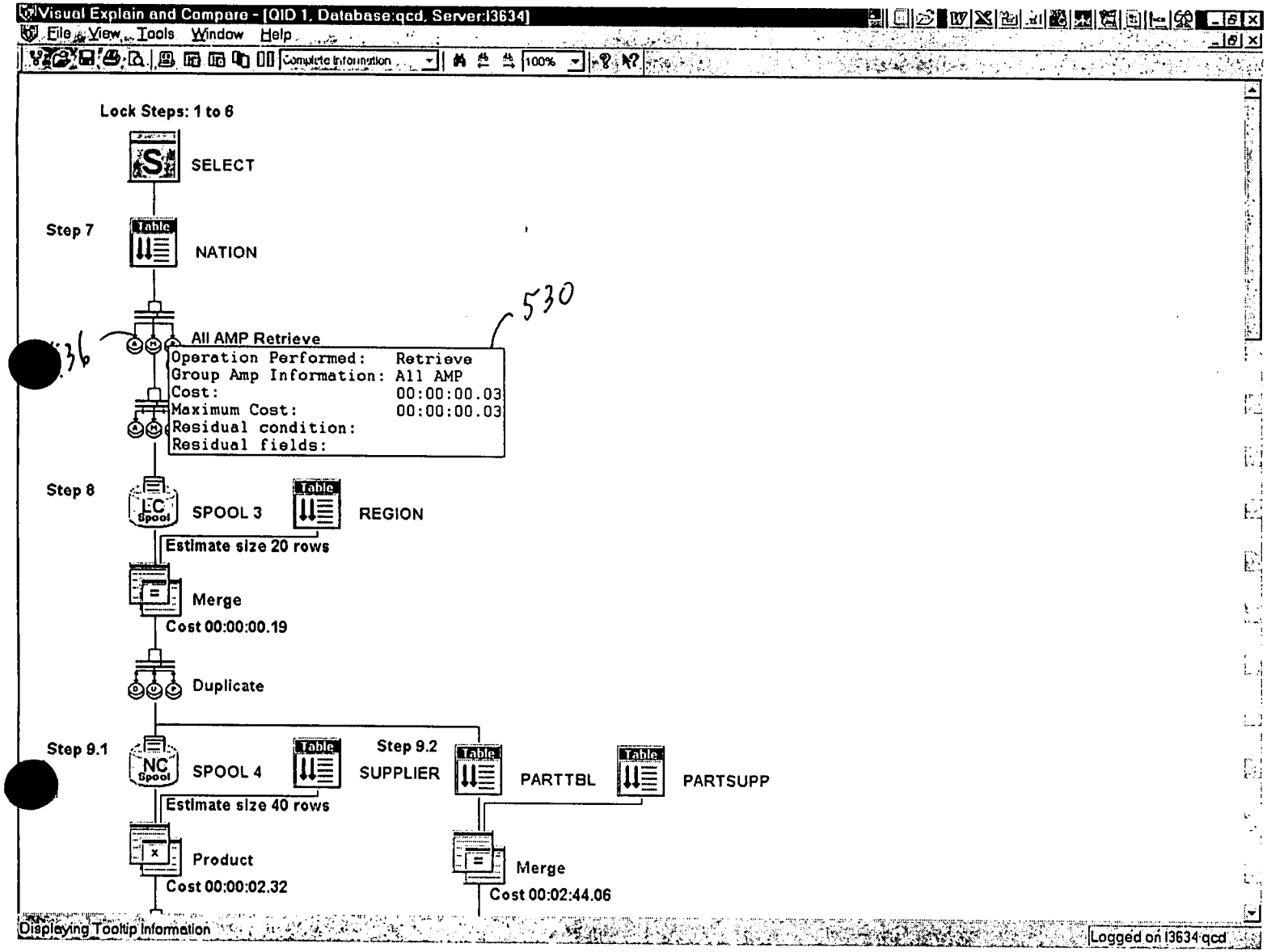

Visual Explain and Compare - [QID 1, Database:qcd, Server:I3634]
File View Tools Window Help
Complete Information
100%
Lock Steps: 1 to 6
SELECT
Step 7
NATION
530
All AMP Retrieve
Operation Performed: Retrieve
Group Amp Information: All AMP
Cost: 00:00:00.03
Maximum Cost: 00:00:00.03
Residual condition:
Residual fields:
Step 8
SPOOL 3
REGION
Estimate size 20 rows
Merge
Cost 00:00:00.19
Duplicate
Step 9.1
SPOOL 4
Estimate size 40 rows
Product
Cost 00:00:02.32
Step 9.2
SUPPLIER
PARTTBL
PARTSUPP
Merge
Cost 00:02:44.06
Displaying Tooltip Information
Logged on I3634:qcd

Fig. 10

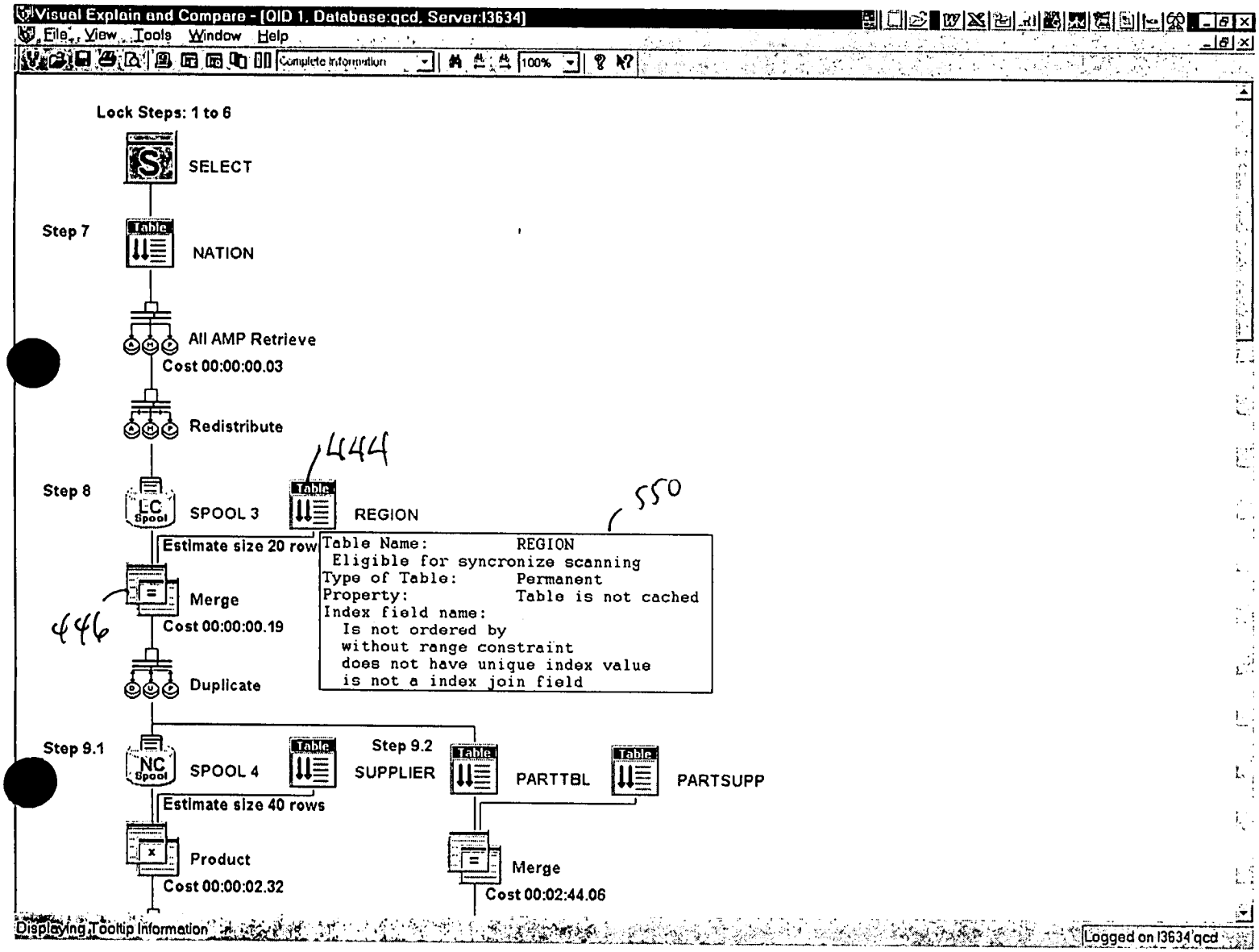

Visual Explain and Compare - [QID 1, Database:qcd, Server:I3634]
File View Tools Window Help
Complete Information
100%
Lock Steps: 1 to 6
SELECT
Step 7
NATION
All AMP Retrieve
Cost 00:00:00.03
Redistribute
444
Step 8
SPOOL 3
REGION
550
Estimate size 20 row
Table Name: REGION
Eligible for syncronize scanning
Type of Table: Permanent
Property: Table is not cached
Index field name:
Is not ordered by
without range constraint
does not have unique index value
is not a index join field
Merge
446
Cost 00:00:00.19
Duplicate
Step 9.1
SPOOL 4
Step 9.2
SUPPLIER
PARTTBL
PARTSUPP
Estimate size 40 rows
Product
Cost 00:00:02.32
Merge
Cost 00:02:44.06
Displaying Tooltip Information
Logged on I3634 qcd

FIG. 12

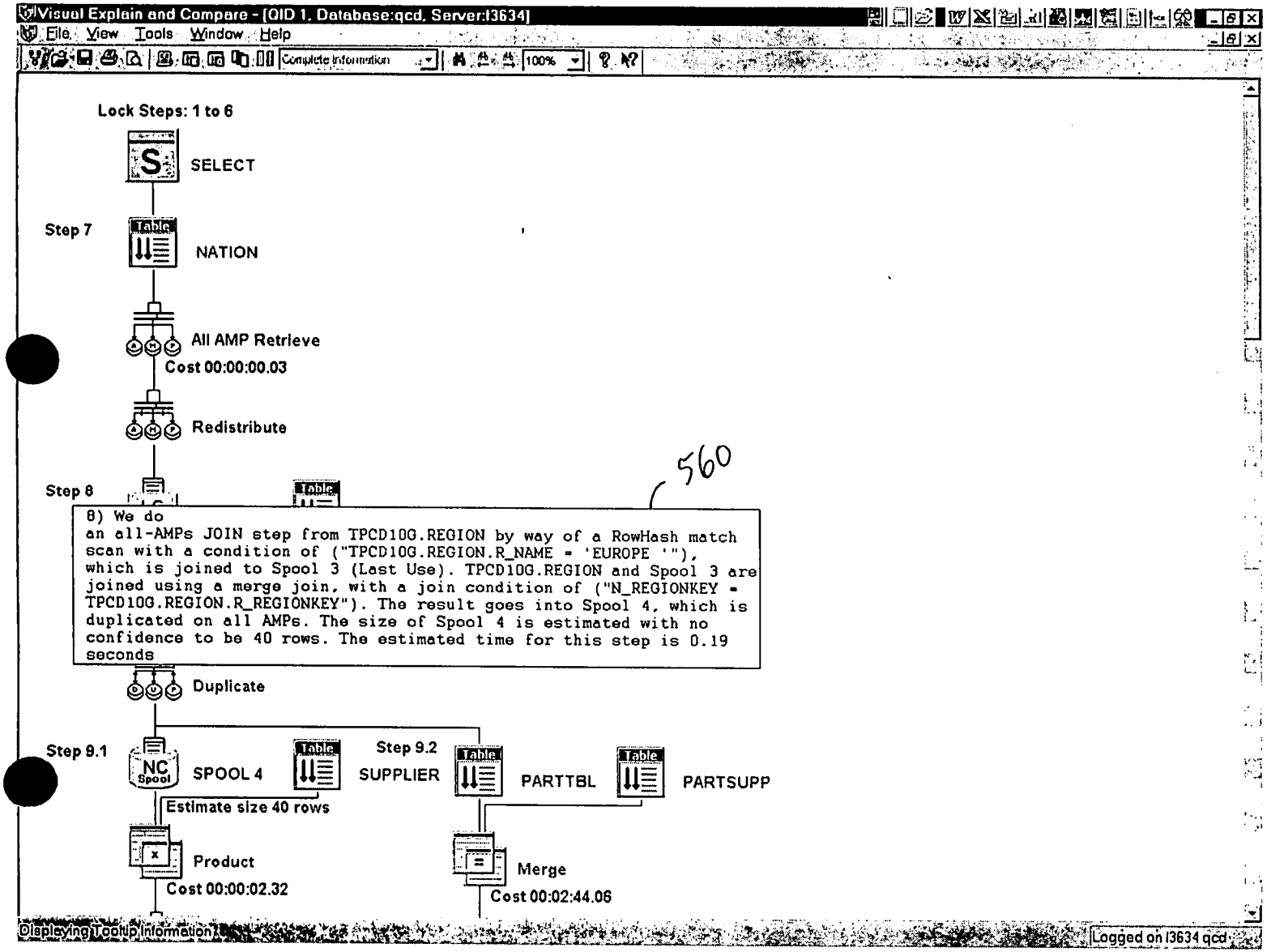

Visual Explain and Compare - [OID 1, Database:qcd, Server:l3634]
File View Tools Window Help
Complete Information
100%
Lock Steps: 1 to 6
SELECT
Step 7
NATION
All AMP Retrieve
Cost 00:00:00.03
Redistribute
Step 8
560
8) We do an all-AMPs JOIN step from TPCD10G.REGION by way of a RowHash match scan with a condition of ("TPCD10G.REGION.R_NAME = 'EUROPE '"), which is joined to Spool 3 (Last Use). TPCD10G.REGION and Spool 3 are joined using a merge join, with a join condition of ("N_REGIONKEY = TPCD10G.REGION.R_REGIONKEY"). The result goes into Spool 4, which is duplicated on all AMPs. The size of Spool 4 is estimated with no confidence to be 40 rows. The estimated time for this step is 0.19 seconds
Duplicate
Step 9.1
SPOOL 4
Estimate size 40 rows
Product
Cost 00:00:02.32
Step 9.2
SUPPLIER
PARTTBL
PARTSUPP
Merge
Cost 00:02:44.06
Displaying Tooltip information
Logged on l3634 qcd

FIG. 13

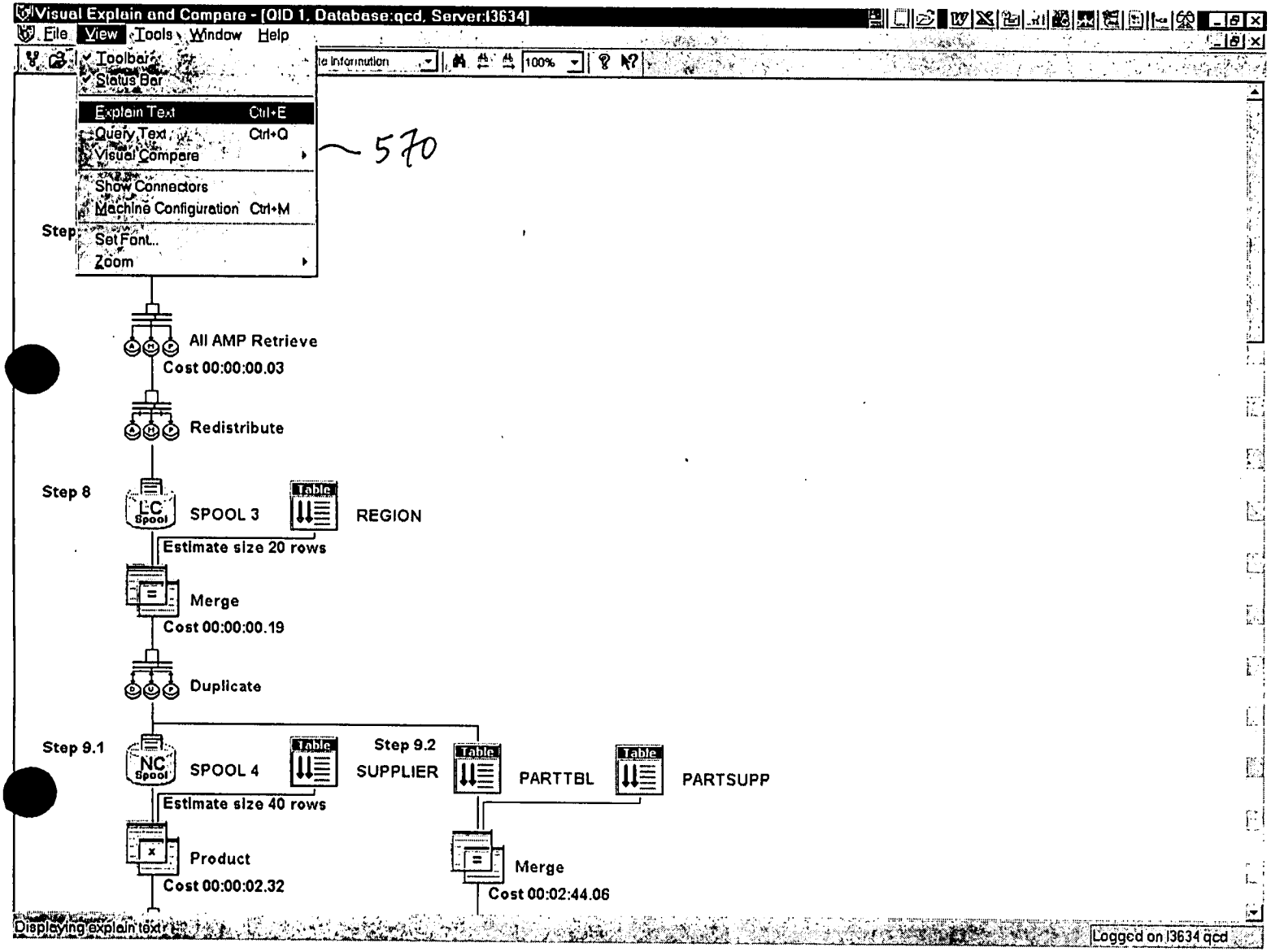

Visual Explain and Compare - [QID 1, Database:qcd, Server:I3634]
File View Tools Window Help
Toolbar
Status Bar
Explain Text Ctrl+E
Query Text Ctrl+Q
Visual Compare
Show Connectors
Machine Configuration Ctrl+M
Set Font...
Zoom
570
All AMP Retrieve
Cost 00:00:00.03
Redistribute
Step 8
LC Spool
SPOOL 3
Table
REGION
Estimate size 20 rows
Merge
Cost 00:00:00.19
Duplicate
Step 9.1
NC Spool
SPOOL 4
Table
Estimate size 40 rows
Product
Cost 00:00:02.32
Step 9.2
SUPPLIER
Table
PARTTBL
Table
PARTSUPP
Merge
Cost 00:02:44.06
Displaying explain text
Logged on I3634 qcd

FIG. 14

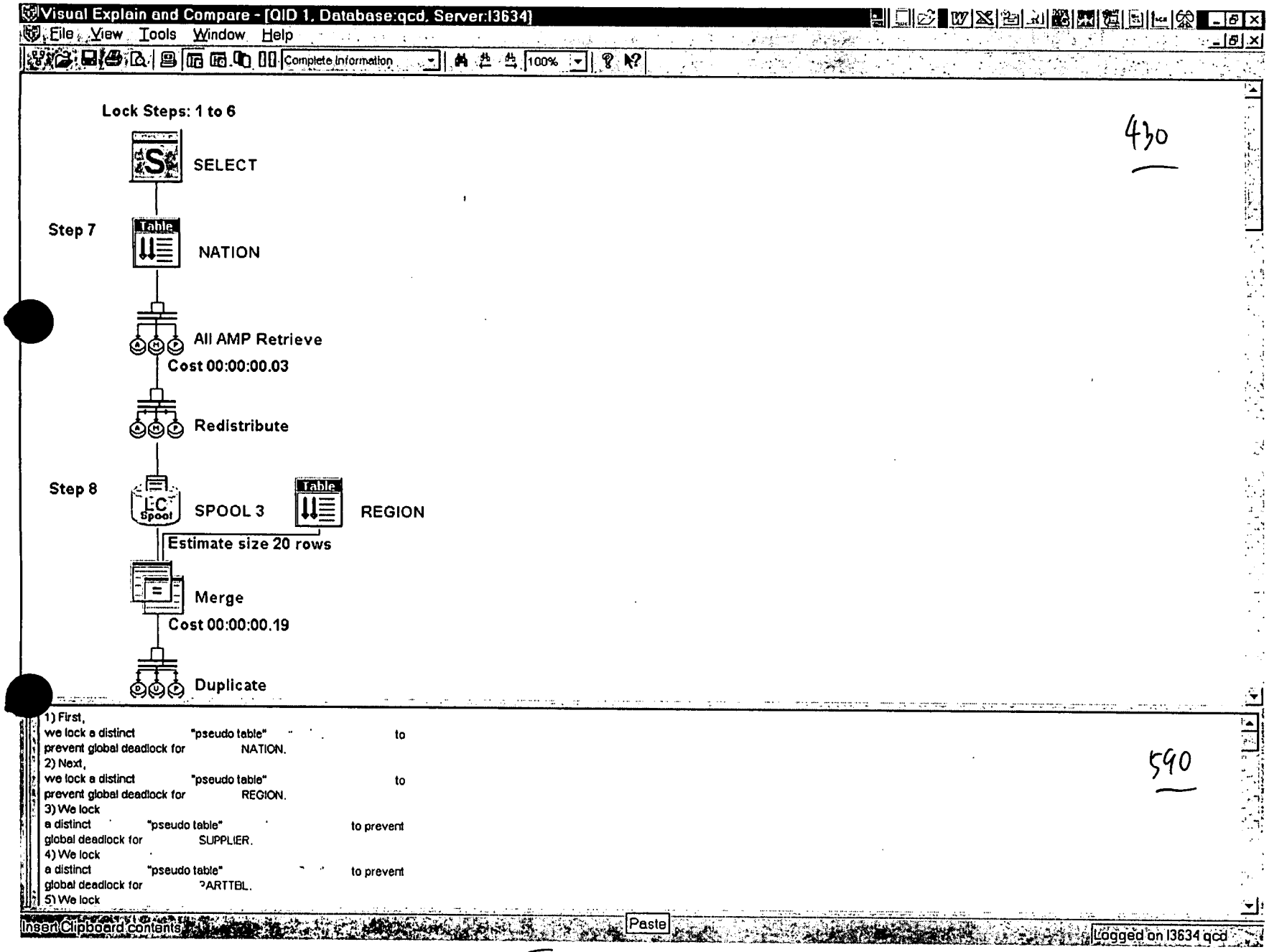
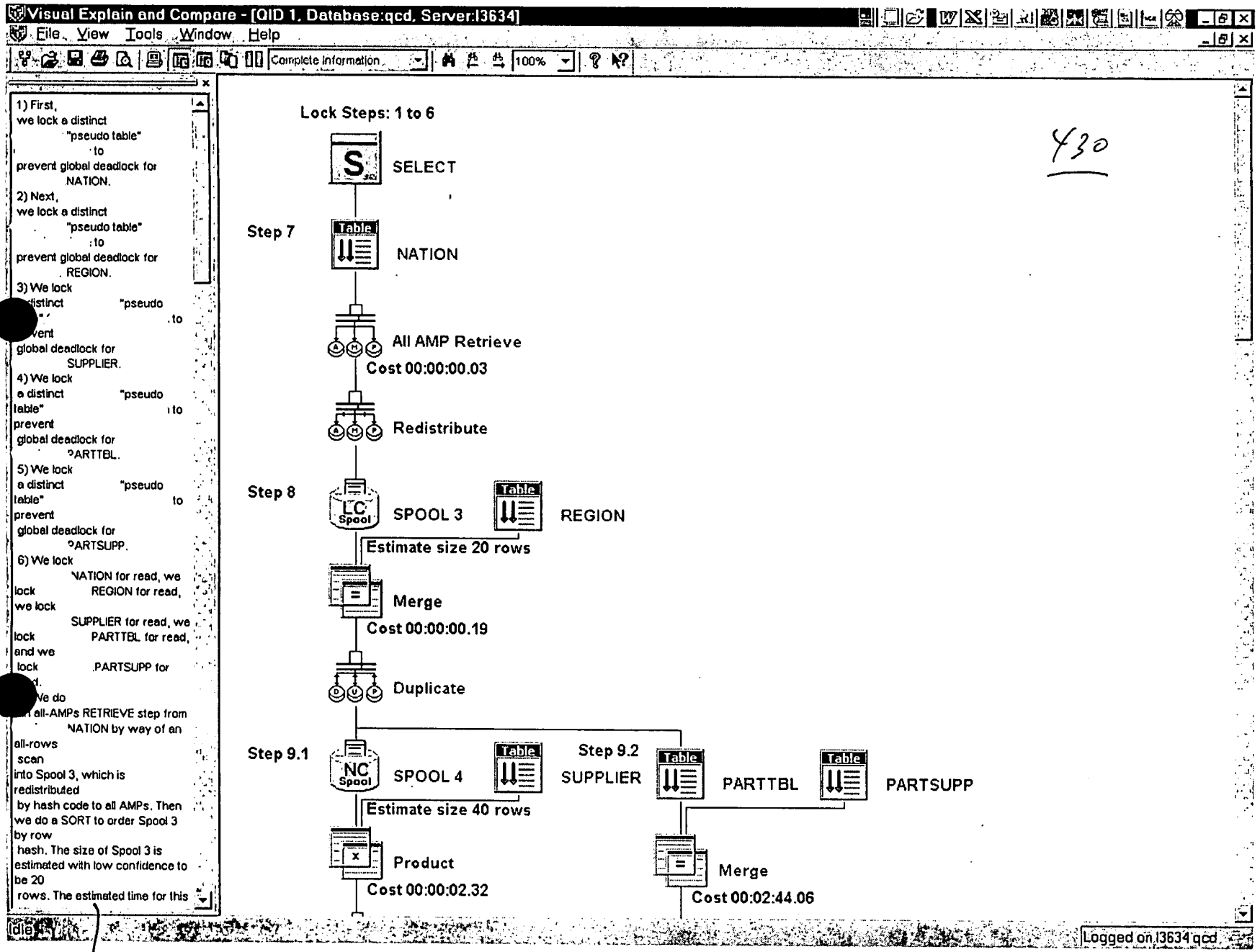

Visual Explain and Compare - [QID 1, Database:qcd, Server:I3634]
File View Tools Window Help
Complete Information
100%
Lock Steps: 1 to 6
430
SELECT
Step 7
NATION
All AMP Retrieve
Cost 00:00:00.03
Redistribute
Step 8
SPOOL 3
REGION
Estimate size 20 rows
Merge
Cost 00:00:00.19
Duplicate
1) First,
we lock a distinct "pseudo table" to
prevent global deadlock for NATION.
2) Next,
we lock a distinct "pseudo table" to
prevent global deadlock for REGION.
3) We lock
a distinct "pseudo table" to prevent
global deadlock for SUPPLIER.
4) We lock
a distinct "pseudo table" to prevent
global deadlock for PARTTBL.
5) We lock
590
Insert Clipboard contents
Paste
Logged on I3634 qcd

FIG. 16



430

580

FIG. 15

0960897G .063000

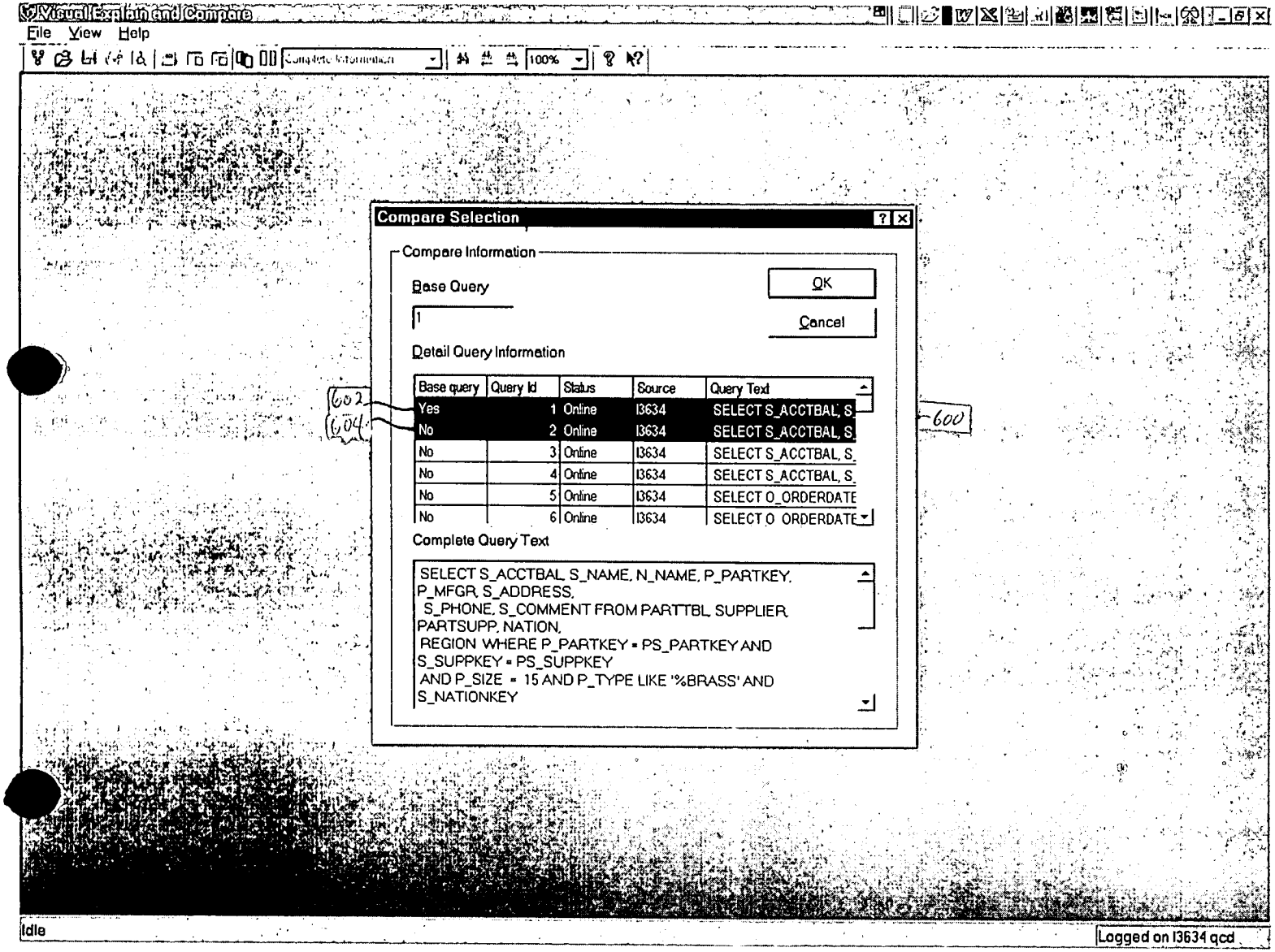

Visual Explain and Compare
File View Help
100%
Compare Selection
Compare Information
Base Query
1
OK
Cancel
Detail Query Information
Base query | Query Id | Status | Source | Query Text
Yes | 1 | Online | I3634 | SELECT S_ACCTBAL, S
No | 2 | Online | I3634 | SELECT S_ACCTBAL, S
No | 3 | Online | I3634 | SELECT S_ACCTBAL, S
No | 4 | Online | I3634 | SELECT S_ACCTBAL, S
No | 5 | Online | I3634 | SELECT O_ORDERDATE
No | 6 | Online | I3634 | SELECT O_ORDERDATE
602
604
600
Complete Query Text
SELECT S_ACCTBAL, S_NAME, N_NAME, P_PARTKEY,
P_MFGR, S_ADDRESS,
S_PHONE, S_COMMENT FROM PARTTBL, SUPPLIER,
PARTSUPP, NATION,
REGION WHERE P_PARTKEY = PS_PARTKEY AND
S_SUPPKEY = PS_SUPPKEY
AND P_SIZE = 15 AND P_TYPE LIKE '%BRASS' AND
S_NATIONKEY
Idle
Logged on I3634 qcd

FIG. 17

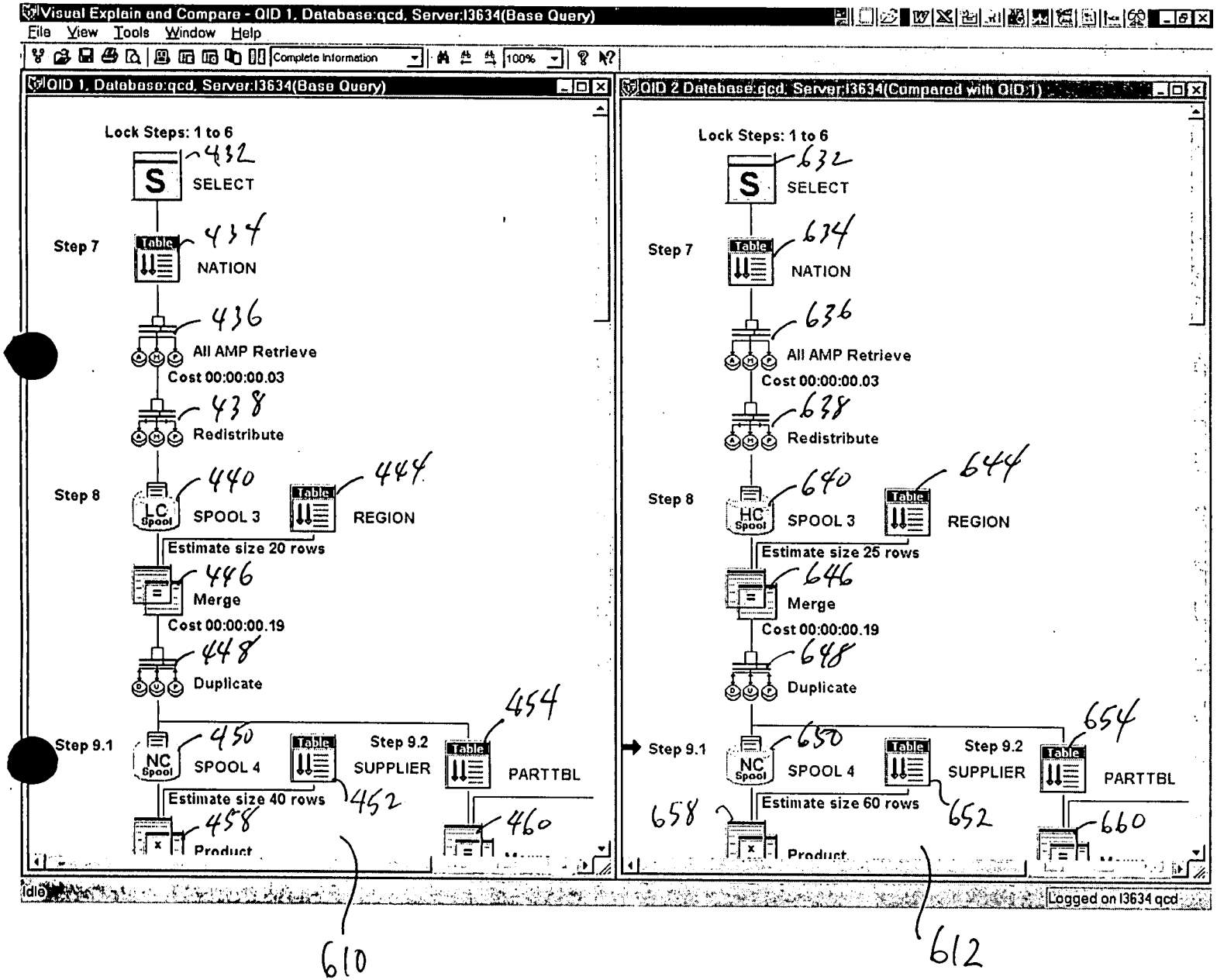

Visual Explain and Compare - QID 1. Database:qcd. Server:I3634(Base Query)
File View Tools Window Help
Complete Information
100%
QID 1. Database:qcd. Server:I3634(Base Query)
QID 2 Database:qcd. Server:I3634(Compared with QID 1)
Lock Steps: 1 to 6
SELECT
Step 7
NATION
All AMP Retrieve
Cost 00:00:00.03
Redistribute
Step 8
SPOOL 3
REGION
Estimate size 20 rows
Merge
Cost 00:00:00.19
Duplicate
Step 9.1
SPOOL 4
Step 9.2
SUPPLIER
PARTTBL
Estimate size 40 rows
Product
Estimate size 25 rows
Estimate size 60 rows
Idle
Logged on I3634 qcd
610
612

FIG. 18

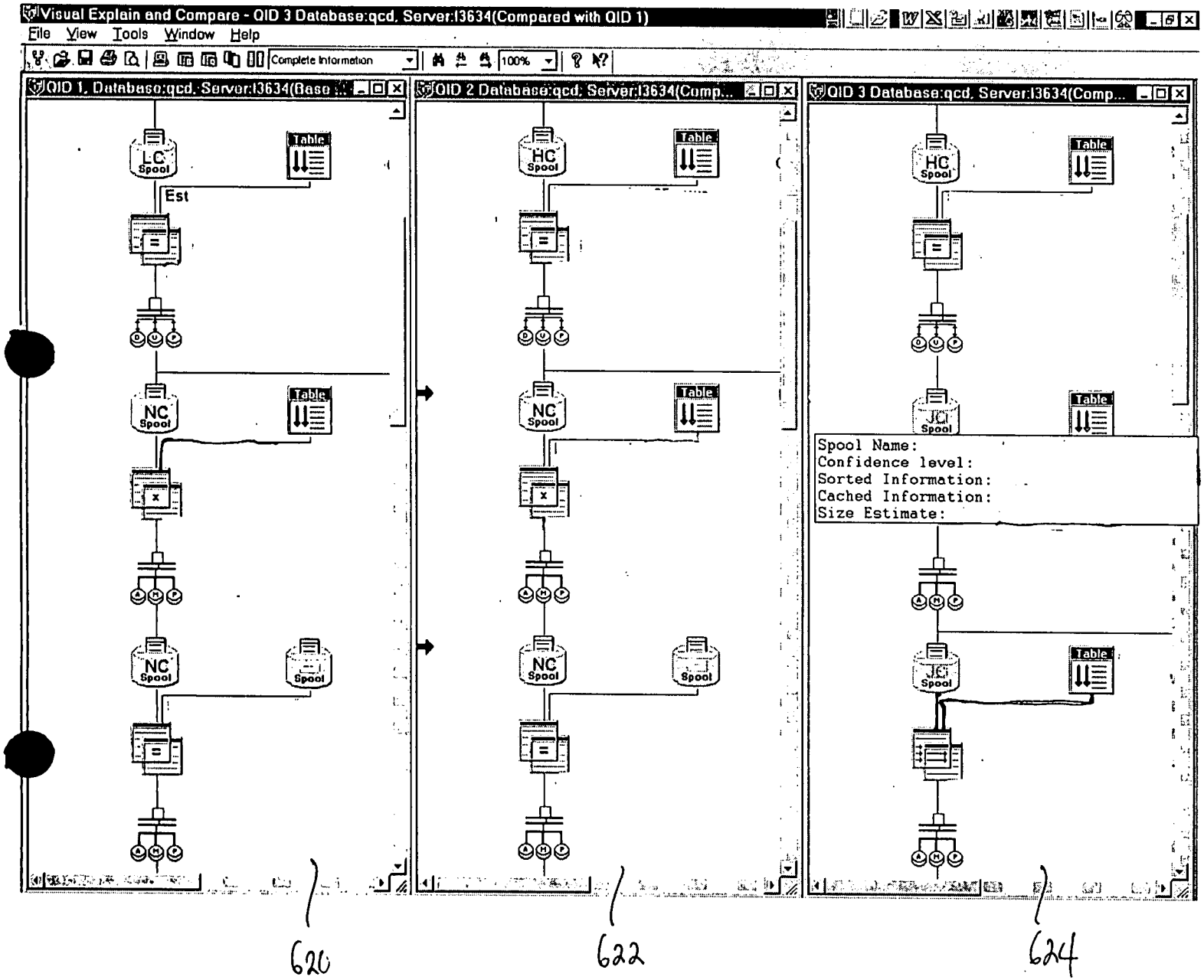

Visual Explain and Compare - QID 3 Database:qcd, Server:I3634(Compared with QID 1)
File View Tools Window Help
Complete Information
100%
QID 1, Database:qcd, Server:I3634(Base
QID 2 Database:qcd, Server:I3634(Comp...
QID 3 Database:qcd, Server:I3634(Comp...
LC Spool
HC Spool
NC Spool
JC Spool
Table
Spool
Est
Spool Name:
Confidence level:
Sorted Information:
Cached Information:
Size Estimate:
620
622
624

FIG. 19

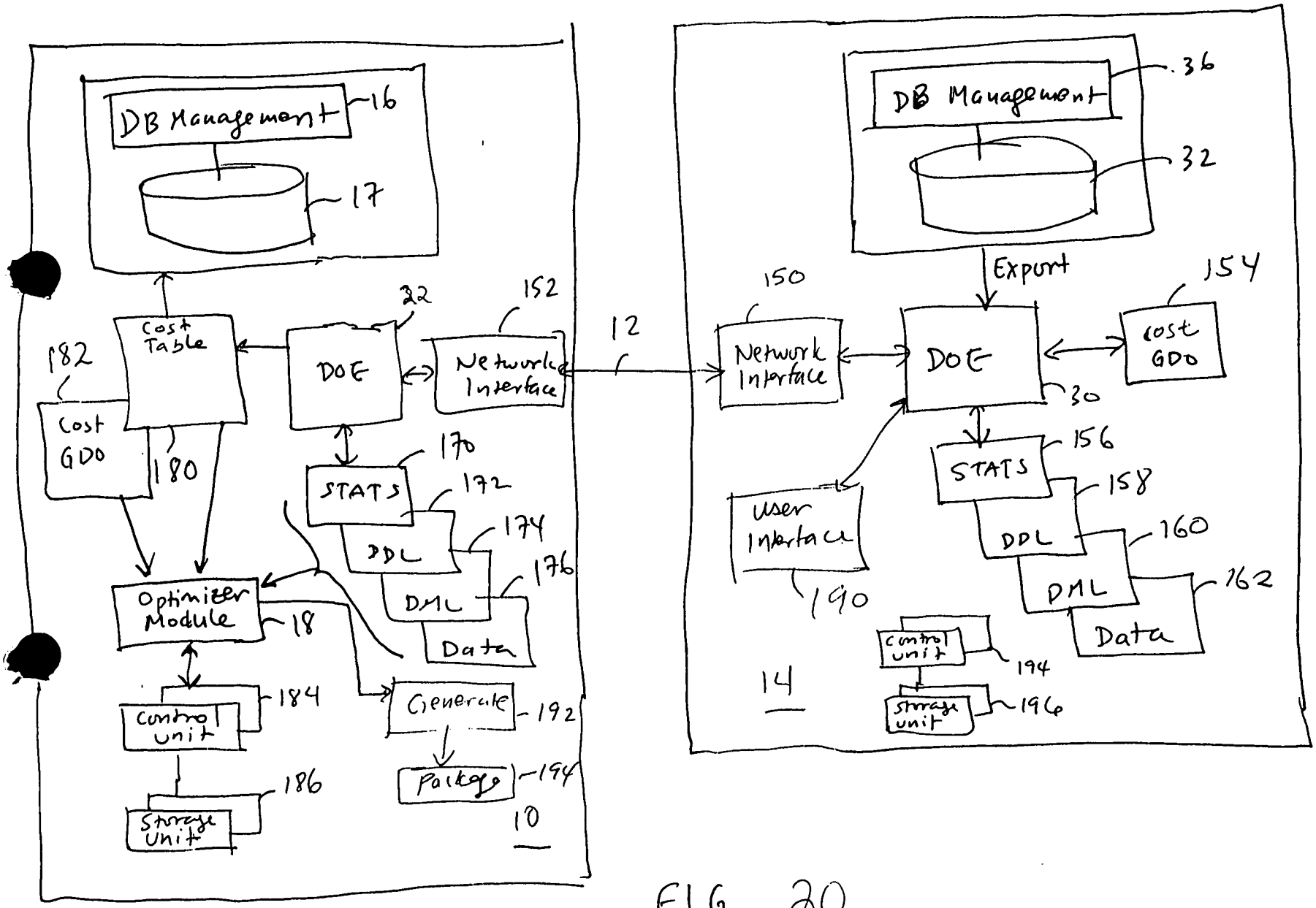


FIG. 20

0960897E.063000

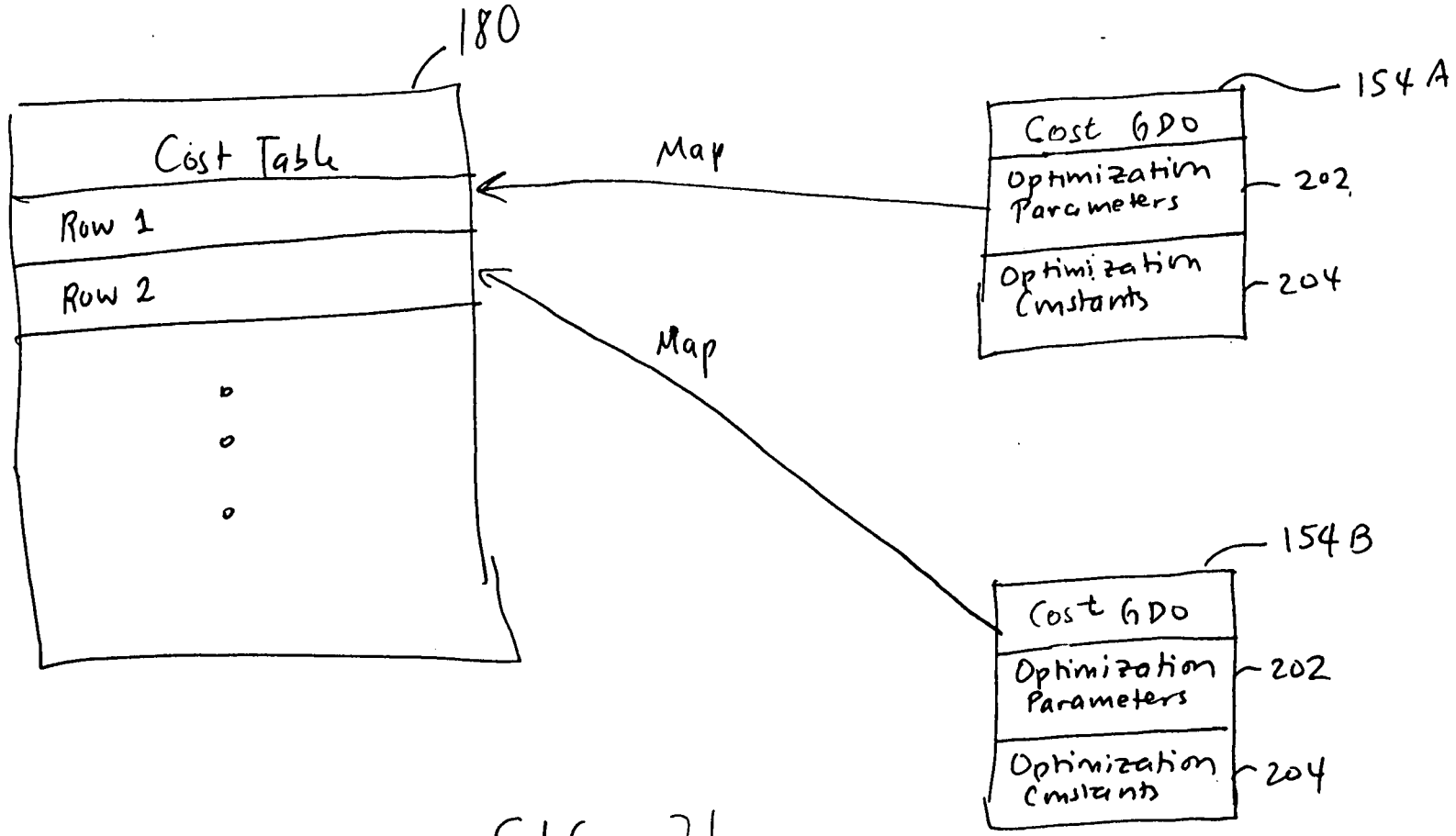


FIG. 21

09608976 .063000

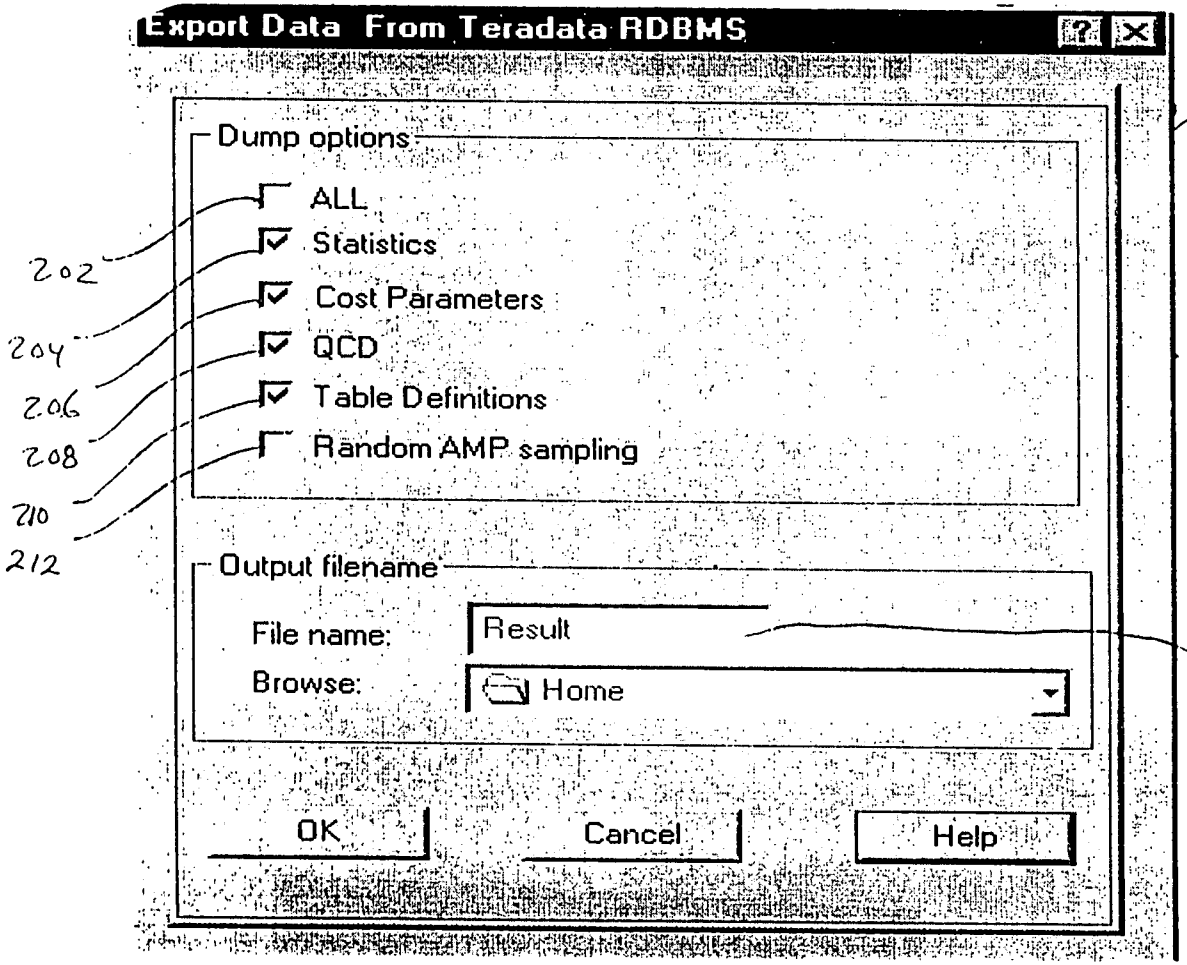

Export Data From Teradata RDBMS
Dump options
ALL
Statistics
Cost Parameters
QCD
Table Definitions
Random AMP sampling
Output filename
File name:
Result
Browse:
Home
OK
Cancel
Help
200
202
204
206
208
210
212
214

FIG. 22